THE PRESENT STATE OF THE *Tillage* in *IRELAND* CONSIDERED,

AND Some METHODS offered For Its IMPROVEMENT.

1508/1/567

By S. Pearson

Multum adeo, raſtris glebas qui frangit inertes,
Vimineaſq; trahit crates, juvat arva; neq; illum
Flava ceres alto nequicquam ſpectat Olympo:
Et qui, proſciſſo quæ ſuſcitat æquore terga,
Rurſus in obliquum verſo perrumpit aratro:
Exercetq; frequens tellurem, atq; imperat arvis.

Virg. Georg. Lib. I.

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THE PRESENT STATE OF THE *Tillage* in *IRELAND* CONSIDERED.

AGRICULTURE is that neceſſary Good to every Country, and the inconveniencies that happen to any Nation that wants it, are ſo great, that its Improvement muſt immediately and moſt nearly affect every one; the advantages of Trade by the Export of its Product, the great opportunity of imploying the Poor in its management,

ment, and the hazard of being ſtarved by a Scarcity of Corn in the Country that gave the Supply, fully evince the neceſſity and uſefulneſs of it; The want and neceſſity of *Tillage* in *Ireland* to ſupply its ſelf is obvious by inſpecting the *Cuſtom-Houſe* Entries of *Dublin* for Corn and Flower imported for ſome Years paſt, where it will appear, that our neighbouring Nation calls to us on that accompt for at leaſt 100000 l. yearly, to remedy which this little Treatiſe is deſigned, and its hoped that then the Multitudes of Poor that are now idle in every part of the Kingdom may be imployed in its *Tillage*, the great drain of Money out of the Kingdom for its Support prevented, and the hazard of wanting that Support removed.

Its known by Obſervation that the beſt Wheat Lands are a ſtiff, ſtrong, yellowiſh Clay, eſpecially if inriched with a Limeſtone or a marliſh loamy Subſtance, and thus is the nature of the Land which now is, and formerly was uſed for *Tillage*, within the reach of the Markets of *Dublin*, and of which there is a contiguous Sufficiency with proper management to give the wanted Supply: Its believed that every

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one will agree the more Such, or any Lands are brought to a fine mold, the greater will be their produce; that the thorough plowing and breaking the Earth, gives to each Grain a certainty of Mold ſufficient to nouriſh it, and the looſeneſs of the Mold makes an eaſy paſſage for the Water to ſink deep enough from the Root, that it may not be prejudiced or rotted by it: Its for theſe Reaſons that all Lands are prepared by ſeveral Fallowings, that being impregnated by the Nitre of the Air, Scorchings of the Sun, and Benefit of the Wind, the ſtubborn barren Clay may be made a fruitful Mold: Wherever there is not this neceſſary fineneſs of Mold there is but a very ſmall Encreaſe, and that this fineneſs is not effected by the Plows now uſed in the preſent Method, is evident, by a View of the Land, and by the ſmall Encreaſe; this cauſes a neglect and diſuſe of the Plow by the *Tiller*, and a reſtriction from *Tillage* by the Landlord, becauſe by bad Husbandry and ill plowing, the Land is deſtroy'd, the Farmer beggar'd, and the Landlord not paid his Rent.

It may be proved and is therefore affirmed, that in the general Run of Farms about *Dublin*, in a Crop of thirty or forty Acres of Wheat, ſeven Barrels *per* Acre thro' the whole is the moſt that is produced, this ſmall Encreaſe which is oftner leſs than ſo much, keeps the Occupier in a miſerable way of living, and in ſuch neceſſity, that he is forced to hurry to Market, even in the Heighth of his Harveſt, as much of the Crop as will pay the Expence of the Harveſt its gather'd in, and leaves him in debt to his Landlord, which charges an Arrear on the growing Crop; and to encreaſe his Poverty by the ſmall Produce, the Expence in the preſent Method, is above one half more than it need be. By this bad Management and Unskilfulneſs, *Tillage* is unprofitable, and therefore neglected, and the Kingdom is expoſed to the inconveniencies before mentioned. The beſt Method then that at preſent occurs, to convince the Countryman of his Error, and ſhew him how by better Management he may get a comfortable Subſiſtance, and not hurt, but rather improve his Land by *Tillage*; will be, Firſt to take a view of his preſent Method of Plowing, and remark the Faults in it, and then to ſhew him that by the recommended Method, them Faults are remedied.

The great Expence and ſmall Profit of the preſent Method, and the great Profit and ſmall Expence of that recommended, are particularly ſhewed in a Calculation annext, of which there can be undeniable Proof given and which is referred to:

But before the Methods of plowing are particularly deſcribed, this much may be ſaid in general in reſpect of the Expence and Profit of each Method, *viz.*

In the preſent Method, there are in each Fallowing uſed in a Days plowing two Men and twelve Horſes, and in the recommended Method, there is uſed in the firſt breaking up the Fallow or Lay two Men and but four Horſes,

In the next plowing but one Man and three Horſes, and in the two laſt plowings but one Man and two Horſes, and at each plowing, there is very near as much more Work in a Day done in this Method; and almoſt double the Quantity produced on an Acre, and but a very little more than half the Quantity of Seed ſown: In the recommended Method, the Labour is performed in ten or eleven

Hours; and in the preſent Method, they work in the longeſt Days, from Four in the Morning till after Sun-ſett.

There is another great Advantage in the recommended Plows, by a Wing which is joined to the Share, and cuts the Weeds and the Land; the preſent Plows do at beſt but tumble them over, and they immediately grow again: But now to the preſent Method of Plowing.

In the firſt breaking up a Fallow or Lay-Land, to make a Ridge, the Plough takes the Diſtance of four Foot in the two extream Lines; the Breadth that the Plough cuts in one going on each Side of the extream Lines is at moſt eight Inches, in its return again, it cuts on each Side eight Inches more, which is in all thirty two Inches then cut; ſo there will ſtill remain unbroke of the Land ſixteen Inches, which is one third Part; every Plowman muſt confeſs this, and if ſo, the Benefit intended by Fallowing, to a third Part is loſt, at a time that one Plowing is worth three other Plowings to meliorate the Earth.

In the *Twy* Fallowing or ſecond Plowing the Method is to plow croſs the Ridges made in the firſt plowing, but they then make the Ridge one third broader, and on that account are oblig'd to take it up in ſix goings, which two additional goings, are but in proportion to the Land taken in; ſo that its plain, a third of what was left unbroke in the firſt plowing, remains ſo in the Second, and is never broke up that Year; becauſe the third Plowing, is in the ſame Method as the Firſt, and the fourth or laſt Plowing as the Second; its evident then, that a ninth part of the Land is wholly untill'd, and in every plowing a third part is unſtirred; In this ſecond plowing, the Draught is inconſtant, and the Motion uneven, by the Joggs it meets with, from the looſen'd to the hard and unbroken Land, ſo that the Plough is often eaſily caſt out; to this may be imputed the many Balks in the Land, that the Plough at that time makes.

In the third Fallowing or back ſtirring, at which time, in four Goings, they ſize up their Land into a Ridge, for the laſt plowing, they make the bottom of their Furrow, from the top of the Ridge fourteen Inches deep, the Prejudice of which is obvious in the fourth plowing; which is thus, They go on each ſide of the Ridge ſo made in the third plowing, an throw into the Furrow the richeſt of th Mold, of which there could not be above eight Inches; and the Method being, to make the Furrow where the Ridg was, and to go as deep as the Furro was, they plow up at leaſt ſix Inches o an immature and unprepared Earth, no cut that Year till then, and ſpread it over the good Mold; it's certain that a much of the Mold as is thus covered, i buried, and the Seed with it: This ſteril Clay, indiſſoluble by Wet or Froſts, wit the Clods unbroken, by the bad Metho of Plowing, occaſions the ſmall Produc complain'd of. In this laſt Plowing, the make the Ridge in ſix Goings, but wit the ſame Diſadvantages of the ſecon Plowing: If it ſhould be alledged, that th Land is left fine and not rough, thi is viſible immediately after ſowing; and i its ſaid, that ſuch roughneſs will not hinde the Growth of the Corn, the contrary may be obſerved in the middle of *April*, when the ſeveral naked Spaces appear after the Corn has ſtooled, which is the Term uſed for each Grain's putting out ſeveral Shoots.

In the Ridge on which the Seed is ſown, the Quantity of Earth is moſt unequal, as is found by Trial:

On the top of the Ridge, there is about five or ſix Inches deep, to the unbroken Ground, on the immediate deſcent, about three; and on the next near the Furrow, about two: This Experiment was made, by obſerving on the top of the Ridge, the only good Corn grew, and that the greateſt Part on both ſides the Ridge, was very thin; and what did grow, was but a weak Straw, with a ſmall light Ear. It was further obſerved on meaſuring, that, with the largeneſs of the Furrow which bears nothing, and the void Spaces on the Ridge, a third part of the Land lay waſte: This then accounts for the ſmall Produce, and ſhews the preſent Method of *Tilling*, bad.

It's evident by experience in this Country, that the recommended Method of Plowing will remove theſe Objections; and that there is a certainty of the great Produce. And to encourage a Probability of the Produce in general, this may be ſaid, that it's well known, that in our neighbouring Country, by this Method, they in common produce ten Barrels of Wheat an Acre, though their Land which gives that Produce, is not better than ours is here; and the Meaſure of their Acre is leſs than ours, in proportion as five is to eight.

Now to the recommended Method of Plowing,

In the firſt breaking up the Lay or Fallow, the Method is, to draw with the Plough two ſtrait Lines that incloſe the intended breadth of the Set, as the term is, which is about thirty ſix Foot; by plowing thus, they go as often in each Set, as cuts up every part of the Land: In this their firſt Fallowing, the Weeds and Graſs are cut and deſtroyed, and every part of the Land made capable to receive the Benefits intended by the Fallowing. Every Body muſt know, that by the Deſtruction of the Weeds and Graſs, ſo much of the Strength of the Land, as was neceſſary for their Support, is preſerved in its ſelf: This Method removes the Inconveniencies objected to in the firſt and ſecond Fallowing, to which I refer.

In the ſecond Fallowing, we croſs plow the Sets made the firſt Plowing, into Sets of equal largeneſs, and then the Land is again all equally cut: The certainty of the Draught prevents Balks, as in the former Method, and the evenneſs of the Motion much forwards the Work.

In the third Plowing, we ſize up the Land in four Goings; but the Ridge is made ſo ſmall, that the depth of the Furrow complain'd of in the former Method, is avoided; and its certain that at this time, we ſtir and cut all the Earth that this Ridge is made of; becauſe, that the largeneſs is proportioned, equal to the four times going of the Plough: This Regularity is obſervable at all times, in the recommended method of Plowing, that they ſtir and cut each part of the Land.

In the fourth Plowing, all the Inconveniencies of the former Method are avoided; for we then make our Ridge by four Goings, and by the ſmalneſs of the Ridge, there is an equal Quantity of good Mold in each Part of it, and the Furrow is very ſmall and ſtirred Mold; ſo that every Grain grows on the Side, as well as on the Top of the Ridge; and the Furrows bear a proportion, as is evident by experience, that the Corn is good and thick in every Part. It has been objected, that by the ſmalneſs of the Ridge and Furrow, the Water cannot be carried off, but muſt at leaſt prejudice the Corn in the Furrow: To this its anſwered, that the number of Furrows is an Advantage, each performing the Office of a Drain, and the Water being divided by ſo many little Drains, it takes away any Current, ſo that there is not a Quantity to rot the Corn, or to waſh away the Mold; this is proved by this Year's experience, by the heavy Rains in Winter, and the exceſſive bad Weather in the Months of *May*, *June* and *July*, and not ſo much prejudice done the Corn ſown in this Method, as to the Corn in the former Method. The certainty of every Grain's growing, gives the Reaſon why the little Quantity of Corn is ſowed on an Acre, as by the Computation, and demonſtrates, that a great part of the Corn, ſowed by the former Method, is buried by the Clods. After this ſhort View of both the Methods of *Tillage*, its hop'd it appears, that the former Method of plowing is bad, and that it does not reduce the Earth to a Mold, fine enough to give a profitable Increaſe, and that it is remedied by the recommended Method.

On Preſumption then that this recommended Method will be thought uſeful, its neceſſary to give ſome account of the Plows, Harrows, *&c.* which are uſed in this Method of *Tillage*; the Plows are of three ſorts which the *Tillage* of every Acre requires.

The *Hartfordſhire* double wheeled Plough, which is uſed in the firſt fallowing or breaking up the Ground.

The *Suffolk* double wheeled Plough, which is uſed in the other two Fallowings.

The *Suffolk* foot Plough, which is uſed in the ſeed Time with the wheel'd Plows, to ſhut up the Furrows; the Management of theſe Plows is beſt ſhewed in practice, by Men well skill'd in their Uſe: Its therefore thought needleſs to ſay more of them, other than give a Deſcription, as by the annexed Plans.

Of the Harrow recommended neceſſary to reduce the Clods to a deſired fineneſs of Mold, there is alſo a Plan given: The Advantages of this Harrow are very great to the Land, and the expence of the Labour much eaſed, being drawn with half the number of Horſes, and much more Expedition.

And in regard that moſt of the plowed Lands, ought to be laid down with Clover Graſs, and other Seeds for three or four Years; which by experience is found to be the greateſt Improvement of them, even equal to a Manure, a Rowler will be wanted, which is ſo very neceſſary, that it is deſcribed; and its Advantages are, that it may from the draught of a ſingle Horſe, be loaded with any weight, equal to the draught of ſeven or eight Horſes; and that the greateſt Clods are with the ſame Machine conquered, and its thus ſuited to the dry as well as moiſt weather.

There is another Rowler, which is uſed after Wheat ſeed, on the ſmall Ridges, where the Land proves very ſtubborn, and ſtrong; this goes with one Horſe in the Furrow, and breaks on each ſide the Ridge, and reduces the Clods to a proper Fineneſs; a Deſcription of this is alſo given. The Expence of each Plough fully harneſſed, and the Harrows and Rowlers is hereafter ſet down.

The Method of ſowing the Graſs ſeeds, ſo as to have an immediate Paſture, and a Supply of the beſt Hay with the nature of the Graſs ſeeds, ſeem to come regularly now, which take as follows.

Of *Clover Graſs*.

The great Advantage of *Clover*, is by the large Stock of Cattle it maintains, in ſo much, that it is a ſure way of dunging and manuring the Land; it agrees beſt with all ſtrong Lands, which are ſuppoſed to be the beſt for Wheat; the Quantity to be ſowed on each Acre, when ſingle, is fifteen Pound; the right time of ſowing it is with Oats or Barley, about ten Days after ſowing the Corn, it muſt be on a calm Day, that the Wind may not obſtruct the Seed in its Caſt; its neceſſary, that the Land be laid as fine and level as poſſible; this is done by thorough plowing, harrowing, and rowling; there muſt be two Plowings at leaſt given the Land, tho' this contradicts the preſent Method uſed here, they allowing it but

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one Plowing; but if the Land were not to be laid down, the Benefit of the two plowings is moſt certain to the Corn, as has been experienc'd with the preſent Plows in the ſame Field, and the Land equally good; that which was plowed twice, produced very near double the Quantity that grew on the Land with one Plowing: The time of harrowing and rowling muſt be well obſerved, and its beſt after Rain, when the Clods are ſoftened by it, and they will then be broke to a fine Mold; on this then ſow your Graſs ſeeds, and you may cover them with a Harrow, or a Gate ſtuck with Buſhes, which ſtirs enough of the Mold for that purpoſe: If the Weather does not anſwer before ſowing, for ſoftning the Clods, the Rowler may go on it any time after, till the Corn is two or three Inches high, this is found to be an Advantage to the Crop of Corn, which for the Benefit of the Graſs, is always ſowed the thinner: This may ſerve as a general Direction to the ſowing of all Graſs ſeeds.

Of *Rey Graſs.*

This ſort of Graſs being the next beſt for the Improvement of Wheat Lands, is as ſuch recommended, and if ſowed with *Clover* mixed, it thickens the bottom, increaſes the Crop, and is found to prevent the rotting of Sheep; of theſe Graſs's when ſow'd mix'd, there muſt be about twelve pound of *Clover* ſowed firſt, and about a Buſhel of *Rey Graſs* after: If *Rey Graſs* be ſowed alone, its neceſſary there be four Buſhels at leaſt to an Acre; it will make very fine Hay, when cut before it grows too ſtrong, and its mighty uſeful becauſe there is ſo early a Spring of it, and will yeild you a Paſture when there is none elſe.

Of *Hop Clover*, *Trefoil*, or three leav'd Graſs.

This may be ſowed, either mixed or ſeparately with either of the former Seeds, with the ſame Uſage and the like Quantity; its found to be a more laſting Graſs than *Clover*, but nothing equals it in its Advantage for Paſture or Hay; it grows pretty thick but very ſhort.

Of *St. Foyne*.

This is reckon'd one of the beſt of Graſs's, and that becauſe it will grow on the worſt of Land to great profit, and it will laſt thirty Years; the Lands that it agrees with are hard and gravilly at bottom, ſo that the Roots cannot get too deep, or upon any Rock that is not covered with above four or five Inches of Mold: There muſt be about five Buſhels ſowed on an Acre, and its beſt to mow it the firſt and ſecond Year, that it may not be poached by heavy Cattles treading it. It may be ſowed alone or with other Grain, but its beſt ſow'd alone, and the time of the ſowing it, will be in the beginning of *September*, or earlier; if mixed, from *February* to the end of *March*; its fit to mow for Hay when it begins to flower, which is about the middle of *May*; to this Graſs, for the Lands it agrees with, the Preference ought to be given, but every Body will be their own Judges in that Caſe.

As its intended by this Treatiſe to encourage the Plow-Farmer, *Clover* and *Rey Graſs*, either ſowed ſeparately or mixed are chiefly recommended, the Profits of which are ſeen in the following Account.

In the latter end of *Auguſt*, when the Oats and Barley are ripe, the *Clover* and *Rey Graſs* will be at leaſt a foot high, for which reaſon, its proper to mow the Crop, for the ſtraw mix'd with the *Clover* Hay will be very good Fodder, and its a much leſs Expence than reaping, there is an immediate Spring after this, and a great Supply of Paſture till ſevere Froſts come, it may be grazed till the middle of *March* following, but its adviſable if the Weather be wet, not to graze it with large Cattle, becauſe it prejudices the Root: If its laid up for Meadow by the middle of *March*, it will be ready for mowing by the middle of *May*, the Ripeneſs ſhows it ſelf by the fading of the *Hony-ſuckle*; if your Land be laid fine and tolerably good, it will then give you twenty Carr load an Acre, it requires but little ſtirring except into Wind-rows that it may lye and wither, this may again be mowed by the latter end of *July*, and will yield ſixteen load an Acre; this Hay, to your draught Cattle, is as good as the common Hay with Oats, it will laſt three Years in the Ground in this full profit, and its the moſt adviſeable way to mow but one Crop off it in each Year, except the firſt, and to graze it intirely the laſt Year before its broke up: If an Acre of this is grazed it will maintain three times the Stock of an Acre of common Paſture, and here is the great Advantage to the Farmer, that Lands thus laid down, and broke up the fourth Year, will yield three as good Crops as Lands of equal Goodneſs when manured on a Fallow.

The *Clover* and *Rey Graſs* Seeds may be furniſhed us from about *Briſtol*, or *Worceſterſhire*, the *Clover* at five pence *per* Pound, and the *Rey Graſs* at three Shillings a Buſhel, all Expences allowed, tho' if they are bought here in the Seed-ſhops, you pay eight pence a pound for the *Clover*, and ten Shillings a Buſhel for the *Rey Graſs*; this Expence will be eaſed by ſaving the Seed, which will encreaſe the Profit, and it is eaſily done by the following Method.

The ſecond Crop is what muſt ſtand for the Seed, and muſt not be cut till you find the Stalk begin to dye, and turn brown and of a yellowiſh Colour; as it ripens you'll perceive the Seed change its Colour, it muſt be made as dry as poſſible, the Seed is got out by threſhing, the time for which is about the middle of *January*, it muſt be very carefully threſhed and there may be two Buſhels an Acre got; this is threſhed upon a boarded Floor: Care muſt be taken that the Stack in which its ſet all the Winter be well thatched, but if there be a Barn convenient, that's the beſt Method of preſerving it; this is particularly to the *Clover*, which when ſaved for Seed muſt be ſowed ſeparately: The *Rey Graſs* Seed is threſhed and got after the ſame manner.

There is a neceſſary Caution to be given if you graze the *Clover*, for by the largeneſs and luſciouſneſs of the Graſs, its apt to burſt Cows or Bullocks, eſpecially if they get to any Water, they muſt therefore be put into it on a dry Day, when the Dew is off the Graſs, and muſt be ſtinted to about half an hour the firſt Day, the next Day an Hour, and ſo cautiouſly ly for four or five Days; you may put in Horſes at any time without the leaſt hazard, and it will fatten them in a very few Days; its of great Advantage to a Dairy by the richneſs of the Milk, and the increaſe of Butter, and when the *Rey Graſs* and *Clover* are mixed together there is little or no danger, eſpecially if it be grazed as it ought to be, before the *Clover* grows too high and rank: Thus much for Graſs Seeds, which will be the Plow-Farmers great Advantage, for thus then you may divide your Land, and lay down every Year ſuch a number of Acres, as your Tenure and the ſeveral Seaſons of *Tillage* will allow, the Land thus laid down yields full Profit to the fourth Year, at which time it will be ſo inriched by the Reſt it has got, and the Manure by grazing, that it will then yield three good Crops of Peaſe, Wheat and Oats, and thus alternately by plowing up, and laying down the Ground, your Farm is kept in good Heart, and full Profit. The number of Acres to be laid down every Year with Graſs Seeds for your Corn Farm may be computed by the following proportion, as thus if your Farm be two hundred Acres

cres, we will ſuppoſe eight Acres of it bottom Meadow which may be made good, and kept ſo; then you muſt lay down every Year thirty two Acres under Graſs Seeds with your Spring Corn, this in three Years, gives ninety ſix Acres of your Land in full profit with Graſs, and allowing ten of them with your Meadow's After-graſs, to maintain the plough Cattle, there remains eighty ſix for Cows for a Dairy, each Acre ſo ſowed, undoubtedly equals three common Acres either in Paſture or Meadow, ſo that here will be the Countryman's great Profit, that by this Method, there is a Proviſion for as great a Dairy, as if the whole Land in the preſent Management was kept to that uſe; this will not only be a further Support to the Kingdom, but will encreaſe its Trade, by giving a Supply to foreign Markets of its Butter and Corn, and will equally advantage the fatning and making Beef. This Management will enable the Farmer to make the neceſſary Drains and Ditches for his Land, to ſhelter it with Incloſures, and give it what other Helps he finds the nature of it requires; and we may ſuppoſe him able to employ his Family, and with a joyned Induſtry increaſe the Proſperity of the Commonwealth: How different are the Circumſtances of the Farmer in this preſent Method, if not known, may eaſily be judged of by viewing the Computation, or a View of one of their Farms which has been obſerved to be thus:

The Farm is about two hundred Acres, moſt of which for theſe forty Years paſt has been conſtantly plowed, in this, there are about ſeven Acres of bad Meadow, ſowre, wet and full of Ruſhes and Flaggers; the only Land kept for Paſture, is where the neceſſity of Firing preſerves it, by the Furz which grow interſperſed on it; they are unable to manure the Land, its no way ſhelter'd, or improved by Hedges, or relieved by Ditches or Drains: By the bad Method of Plowing, and this bad uſage, in their beſt Crops of Wheat there don't grow above ſeven Barrels an Acre; the Farm maintains about ſeventeen Plough Cattle, and three or four Cows; they endeavour to plow more Land than they can manage, which hurries them ſo much, that its believ'd it even makes their bad Method worſe, and they find it difficult to finiſh their Seaſons in due time, though they are conſtantly ſlaving; the Produce is carried to Market by theſe harraſs'd Cattle; ſuch Farms as theſe may be found within ſeven Miles of *Dublin*, and the Rent they are held at is twelve ſhillings *per* Acre: It's thought on as an Expedient to enable the Countryman to purſue it, if the recommended Method be approved of, that he reduce his Farm to one hundred Acres, the Expence of managing that will be within his reach, as may be judg'd by the Computation; and if he be help'd to buy the Plows, Harrows and Rowlers, by ſome Incouragement of Credit from the Landlord, the Landlord cannot loſe by it, becauſe it will much improve and increaſe his Eſtate, for Labour and Induſtry can alone make Land valuable.

Here follows the Calculation, the Value and Labour of Horſes, the Rent, and Carriage of the Corn rated to Farms about eight or ten Miles from *Dublin*.

The Expence of plowing an Acre in the preſent Method, with all other Charges attending that Acre and the Value of its Produce.

The firſt Fallowing or breaking up the Lay.	*l.*	*s.*	*d.*
To Six Horſes for two Days at four pence each.	0	4	0
To two Men for two Days one at ſix pence the the other at eight Pence.	0	2	4
The Second Plowing.			
To ſix Horſes for two Days at four Pence each.	0	4	0
To two Men.	0	2	4
The third Plowing or back ſtirring			
To ſix Horſes a Day and Half at four pence	0	3	0
To two Men a Day and Half.	0	1	9
The laſt Plowing or Seed Time.			
To ſix Horſes a Day and Half	0	3	0
To two Men for ditto.	0	1	9
The ſeveral Harrowings *per* Acre.	0	1	0
No Wear of the Harneſs Iron or Plough reckoned.	*l.* 1	3	2
A Barrel of Wheat for Seed at the middle Price.	0	15	0
Rent of the Land *per* Acre.	0	12	0
Tithe *per* Acre.	0	5	0
Reaping, binding and ſtacking in the Field.	0	5	0
Threſhing the Produce, which is ſeven Barrels at nine Pence *per* Barrel.	0	5	3
Carriage to Market at ſix Pence *per* Barrel	0	3	6
Weeding, at nine Pence *per* Acre.	0	0	9
	l. 3	9	8
Value of the Produce being ſeven Barrels at fifteen Shillings *per* Barrel.	5	5	0
Deduct Expence.	3	9	8
Remains.	*l.* 1	15	4

The

The Expence of Plowing an Acre in the recommended Method, with all other Charges attending that Acre and the Value of its Produce.

	l.	s.	d.
The Firſt Fallowing.			
To four Horſes one Day at ſix Pence each.	0	2	0
To two Men.	0	1	4
Second Plowing.			
To three Horſes at ſix Pence each one Day.	0	1	6
To one Man.	0	0	8
Third Plowing.			
To three Horſes at ſix Pence each one Day.	0	1	6
To one Man.	0	0	8
Fourth Plowing.			
They do three Acres in two Days, with two Horſes and a Man which proportions the Expence of an Acre to. ——— ——— ———	0	1	1¼
Allowed for Harrowing.	0	1	0
	l. 0	9	9¼
To two Buſhels and two Pecks of Wheat at fifteen Shillings *per* Barrel.	0	9	4½
Rent of the Land.	0	12	0
Tithe *per* Acre as at preſent	0	5	0
Reaping, binding and ſtacking in the Field.	0	6	0
Threſhing the Produce, being thirteen Barrels at nine Pence each Barrel.	0	9	9
Carriage to Market at ſix Pence *per* Barrel.	0	6	6
To Weeding.	0	0	9
	l. 2	19	1¾
Value of the Produce being thirteen Barrels at fifteen Shillings *per* Barrel.	9	15	0
Deduct Expence.	2	19	1¾
Remains.	l. 6	15	10¼

Thus then is conſidered in a particular Method, the Expence and Profit of each way of *Tillage*; but it muſt be obſerved, that the calculated Profit is much leſſened by other Expences, which could not ſo well be inſerted in the Calculation, as thus;

The Carriage of Corn home to the Haggard, This at preſent is done by Cars, each of which requires a particular Attender, and there's a neceſſity for a Scaffold in the Haggard; they bring home a very little Quantity at a time, and are more expenſive and waſteful than need be; this may be made eaſier by the uſe of a Cart, furniſhed with a Fore-body, Tail and Side-ladders, which will carry home with three Horſes, as much as ſix Cars commonly load, or in other words a large field Stack; by covering the fore and tail Ladders with a Winnow-ſheet, the Corn which is ſhed by ſhaking is ſaved; the body of the Cart ſerves for a Scaffold, which ſaves the Expence of double pitching, and the Loſs of a ſecond Shed; by theſe Carts the Expence of the Carriage of the Corn to Market is leſſened, for in the Carrying twelve Barrels three Horſes and a Man are ſaved.

There's another Loſs in the preſent ſtacking the Corn on the Ground, by which the Rats and Mice deſtroy at leaſt a ninth of the Crop, this is remedied by building Staddles about three foot high, plaiſter'd and covered with broad Flags, which hang over about nine Inches, and intirely keep them off, if any are carry'd home in the Sheaves, they are obliged to go down for Water and can't return.

There's another Expence and Loſs, in the Method at preſent uſed in cleaning their Corn, being obliged to carry it from the Barn to a place convenient for the Wind, and it has this Inconveniency that there muſt be fair Weather and Wind, elſe they are at a ſtop, and their Chaff is loſt which would very much help them, being good Food for draft Cattle, eſpecially when you mix a Peck of Oats with a Barrel of it, this is ſaved by caſting the Corn in the Barn; two Men will clean in this Manner, and ſcreen fit for Market thirty Barrels a Day. Its a little difficult by Words to ſhew the Method of caſting and cleaning, but on enquiry, that and all theſe other Methods of managing the Land may be ſeen within ſix Miles of *Dublin*.

Its humbly offer'd, that the recommended Method of *Tilling*, will be of great Advantage, to the raiſing *Hemp* and *Flax:* As to its greater Produce, its not affirm'd by experience, there being as yet no Tryal of it, but is concluded from what the Author has obſerved, in reading Mr. *Slator*'s Inſtructions, publiſh'd on that occaſion; where a thorough fallowing of the Land, and reducing it to the greateſt fineneſs, is inſiſted on: And if what has been objected to the preſent Method be admitted, then ſuch Lands are not duly prepared, and conſequently cannot yield the full Increaſe; but however, this is proved by the Computation, that in the Expence of *Tilling* each Acre, there is better than thirteen Shillings, ſaved by the recommended Method, which if not equal to, is a great proportion to the Rent of the Land.

As it is intended by the Writer of theſe Sheets, to convey to every one the beſt Inſtructions he can to forward the Deſign, ſo he has choſe the moſt plain Addreſs, without regard to Cenſure for the Meanneſs of its Style; in which he has been as much confin'd, as is the ſmall and low Education of the Perſons who are to put it in practice: And the readier to tranſmit this into the immediate Uſe of every Part of this Kingdom, with as little Expence and Trouble as may be, the Plans of the ſeveral Plows and Inſtruments are annext, and the greateſt Care has been taken to have 'em moſt exactly drawn and laid down, by a Scale in a Copper-Plate; ſo that the common Plow-maker and Smith may be inſtructed to make 'em, in any Part of the Kingdom.

Before this little Paper is concluded, it may not be amiſs to obſerve, that as in moſt things ſo in this, both Farmer and Plow-holder are ſo much wedded to their long accuſtomed Methods, that to conquer that Prejudice will be the greateſt Difficulty, in conveying to them a Knowledge of the recommended one; When the Prejudice of the Farmer is removed, he can beſt apply a Remedy to that Diſeaſe in his Servant. To remove the Farmer's Prejudice, a conviction of the greater Gain and leſs Expence will be ſufficient; And it's therefore humbly offer'd, as a ſure way to do this, that the Perſons of Station and Fortune in the Kingdom, encourage ſome honeſt Families well skilled in the recommended Husbandry, to come and live among us; that then the happy and eaſy Circumſtances of ſuch a Family, on a Farm of three or four Score Acres in the ſame Land but with different Uſage, may be ſeen by 'em; this will convince the Farmer of his preſent Error, and force on him the Practice of his thriving Neighbour: The Encreaſe of their ſeveral Eſtates, will greatly repay the Landlords the Expence of ſuch Encouragement, and the common Goo of their Country will make them eve dear to Poſterity.

A Deſcription of the Parts of the Plows, Harrow and Rowlers, as they are marked in the Plate.

THE *Harfordſhire double-wheel-Plow.* *A A* the Plough-beam, *B* the Handle, *C* the Head or Share-beam, *D* the Breaſt of Wood, *E* the Sheath, *F* the Share-iron, *G* the Coulter, *H* the Plough-pin and Collar-links, *I* the Boulſter, *K* the Wheels, *L* the Nave, and iron Axletree,

The *Suffolk double-wheel-Plough*, Fig. 1. *A A* the Beam with Holes to take up and let down the Plough, *B B* the Handle, *C* the Sheath, *D* the Ground, or Head, *E* the right Reſt, [in Wood.] *F* the Coulter, *G* the Share and Rein, *H* the Breaſt, *I* the right Reſt Streake, *K* the Ground-ſtreake, *L* the Setfaſt to the Breaſt, [in Iron.] *M* the Bolſter-piece of Wood with Iron-Pins, *N N* the Drafts with Holes and Iron-pins, *O* the three Horſe Wipple-tree with Iron-caps, *P* the two Horſe Wipple-tree with Iron-caps, *Q Q* the Gallows for the Reins ſupported with two Iron-pins, *R* the Holes thro' which the Reins goe, *S* the Ironbolt, that goes thro' the Bolſter, *T* the Sink-iron, *U* the Collar for fixing it to the Beam, *W* the Beam-nail, *X* a Chain to keep the Gallows up, *Y* a Pin to faſten the Wipple-tree to the Drafts, *Z* the Wheels, *Z Z* the Nave, and iron Axletree.

Fig. II. 1 The Padd-iron, 2 the Land-ſtreake.

The *Suffolk Foot-plough*, Fig. 1. *A A* the Beam, *B B* the Handle, *C* the Sheath *D* the Ground or Head, *E* the right Reſt, [in Wood.] F the Chain and Swivel, *G* the Plow-guide, *H* the Guide-pins, *I* the Coulter, *K* the Share and Rein, *L* the Breaſt, *M* the right Reſt Streake, *N* the Ground Streake, *O* the Setfaſt to the Breaſt. [in Iron.]

Fig. II. 1 the Pad of Iron. 2 the Land-ſtreake.

The *Harrow*. *AAAA* the Harrows with Iron-pins, *B B* the Iron Loops that join them, *C C* the draft Chain, *D D* the Wipple-trees.

The *Large Rowler*. *A A* the Rowler with Iron-gudgeons and Iron-hoops at at each end, *B B B B* the Frame Side-pieces, and Beams to lay Weight on as Occaſion, *CC* the Shafts, *DD* the Pins to keep the Weight on.

The *Small Rowler. AA* the Rowler with Iron-gudgeons and Hoops at each end, *BB* the Drafts for one Horſe.

The Expence of theſe Plows, Harrow and Rowlers uſed in the Recommended Method.

The *Harfordſhire* double-wheel-Plow, four Pound.

The *Suffolk* double-wheel-Plow, three Pound ten Shillings.

The *Suffolk* foot-Plow, one Pound Five.

The Harrow, fifteen Shillings.

The large Rowler and frame one Pound five Shillings.

The ſmall Rowler, ten Shillings.

FINIS.

The Harfordshire double-Wh

Fig. 1.

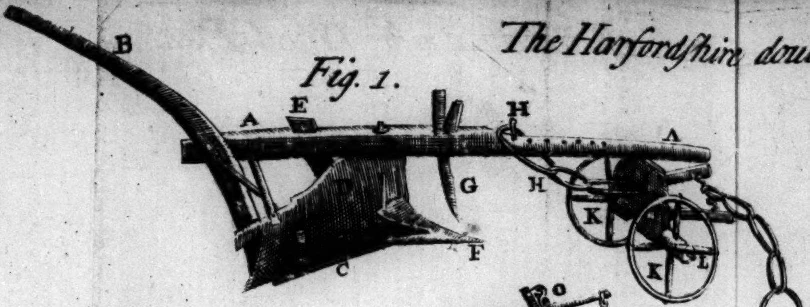
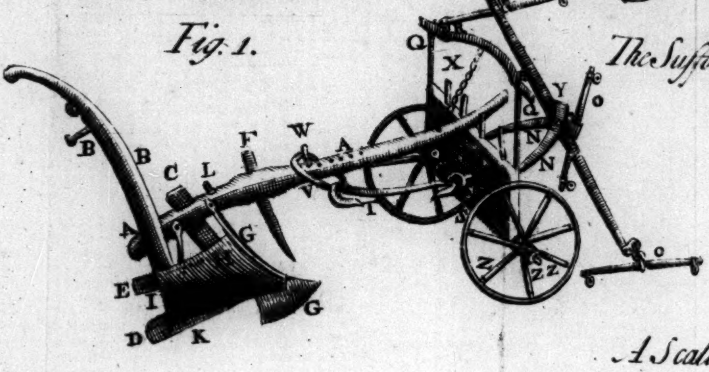


Fig. 1.

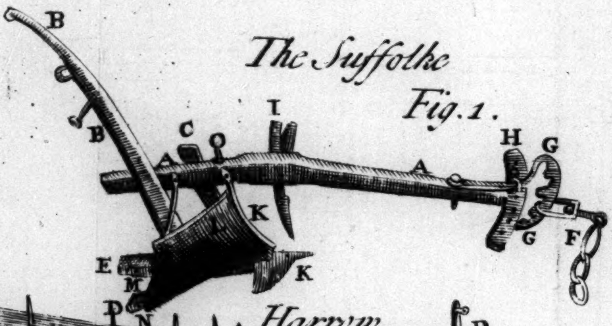
The Suffolke double



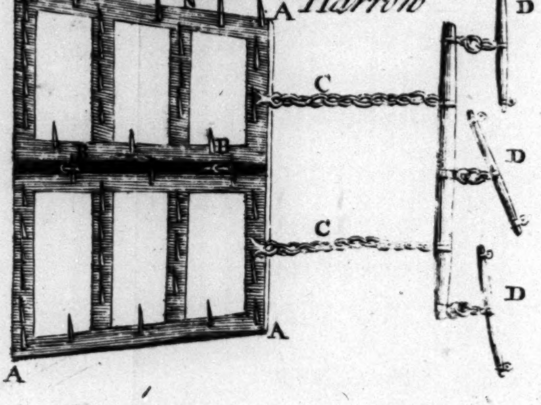
A Scale of Feet

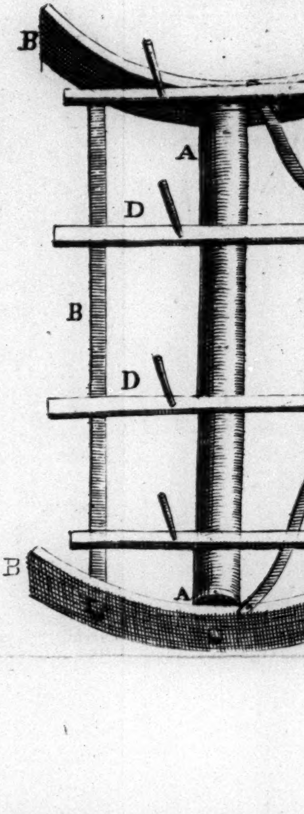
The Suffolke

Fig. 1.



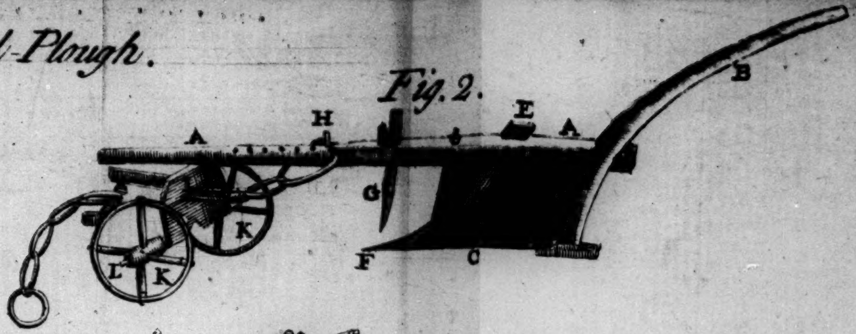
Harrow





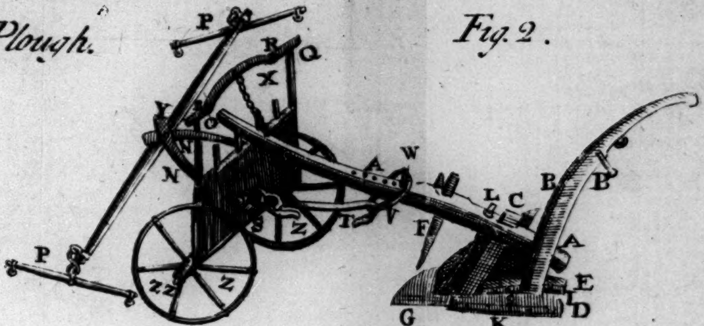
le-Wheel-Plough.

Fig. 2.

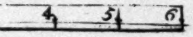


ouble Wheel Plough.

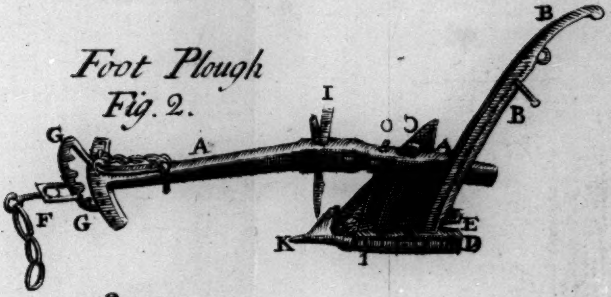
Fig. 2 .

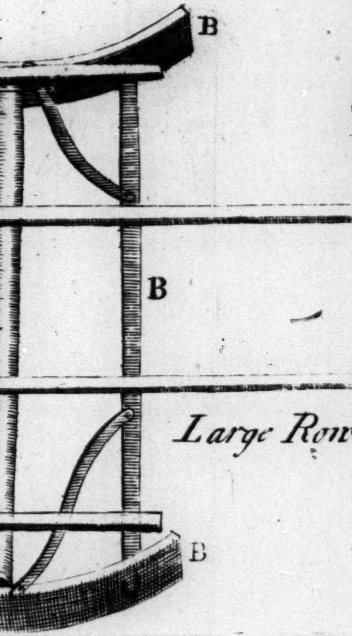


Feet

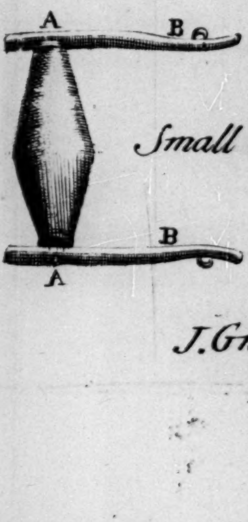


Foot Plough
Fig. 2.





Large Rowler



Small Rowler

J. Gwim Sculp.